

## Environmental Health; Healthy Housing Federal Efforts, State Authorization

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### Typical Environmental Exposures - 2008



### Federal Environmental Health Agencies

- Centers for Disease Control and Prevention
- Environmental Protection Agency
- Housing and Urban Development
- National Institute of Environmental Health Science
- Occupational Safety and Health
- Food and Drug Administration
- Consumer Product Safety Commission

### Healthy Housing

- Inadequate housing has been linked to adverse human health effects
- Millions of children live in home environments that are unhealthy
- Coordinated, comprehensive, and practical approach to prevent diseases that result from environmental health hazards related to housing

### Hazards found in Housing

- Indoor air pollutants
  - chemicals, allergens, smoke, ventilation
- Lead hazards
- Carbon Monoxide
- Pesticides
- Chemical Hazards
- Rat infestations
- Radon
- Mold



### Products Recalled

*In 2007, CPSC announced 106 recalls of lead-contaminated products totaling 17,126,810 individual items — a 500 percent increase from 2006.*  
*— Of the 193 recalls due to lead since 2001, only 14 products were recalled before 2005*

### Prominent Recalls

WARNING: This bracelet is

LETHAL



### China Syndrome

*Estimated 70-80% of toys sold today come from China*

*Dept. of Homeland Security only inspects about 1 out of 100 cargo containers at Port*



### The China Syndrome

Michigan H.R. 174

*Asks Congress to examine trade policies with China, including issues of safety and overall impact of Chinese goods on the country.*

Pennsylvania

*Urges Congress to ban all products, especially products aimed at children, from China.*

### Lead in Products

#### Who regulates lead in consumer products?

- Food and Drug Administration (FDA)
  - If lead is in foods (apples) or on cosmetics
- Consumer Product Safety Commission (CPSC) (CPSA and FHSA)
  - For all consumer products
  - Above 0.06% by weight, if use may cause substantial injury or illness

### Lead Standards



- FDA- max lead levels
  - in candies- 0.1 ppm
  - Dairy- 0.5 ppm
  - Food- 6 mcg/day
  - Cosmetics- 20 ppm
- CPSC - 600 ppm for toys
- MI - 0.06 for toys
- WA - 0.009 for children's products

While Congress debates -  
States take action

18 states have bans or restriction on lead-containing products, providing regulatory authority beyond what CPSC demands:

AL, AZ, CA, CT, IL, IA, KY, LA, ME, MA, MI, MN, NJ, PA, RI, VT, WA and WI.

South Carolina repealed its ban in 2003 due to lack of enforcement

WA and ME Children's  
Consumer Safe Products

**Washington H.B. 2647**

- Lead limit: 0.009% by total weight
- Cadmium: 0.004% by weight
- Phthalates: 0.10% by weight

**Maine H.B. 1432 (LD 2048)**

- Maintain list of high priority toxic chemicals in children's products
- Requires Disclosure
- Mandates Safer Alternatives

## State Legislation

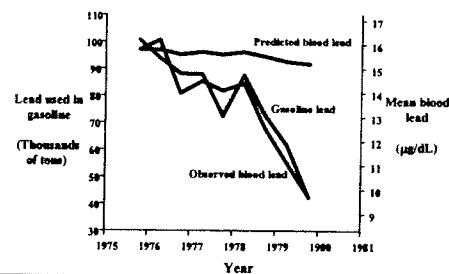
**New Jersey S.B. 265**

- Prohibits the sale or lease of unsafe or recalled children's products (whether voluntary or involuntary)
- Requires the Department of Children and Families to provide a list of unsafe children's products on its website
- Provides enforcement

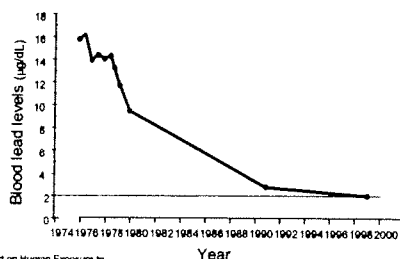
Oregon H.B. 3631a enacted March 2008

14 states considered legislation in 2008

## BLL in Children after removal of lead in Gasoline



## Blood Lead Levels in Children since 1975



CDC National Report on Human Exposure to Environmental Chemicals, March 2001

## Hazards of LPB Dust

- In young children, neurocognitive decrements are associated with blood lead concentrations in the range of 5-10 micrograms per deciliter (µg/dL), and possibly somewhat lower.
  - A decline of 6.2 points in full scale IQ for an increase in concurrent blood lead levels from 1 to 10 µg/dL has been estimated.
- Most lead poisoning is caused by exposure to lead-paint dust
  - House dust is the *most common exposure pathway* through which children are exposed to lead-based paint hazards.
  - Younger children, in particular, are at risk for high exposures via hand-to-mouth activity, and may also ingest lead-based paint chips from flaking paint on walls, windows, and doors.

### How Widespread is LBP Poisoning?

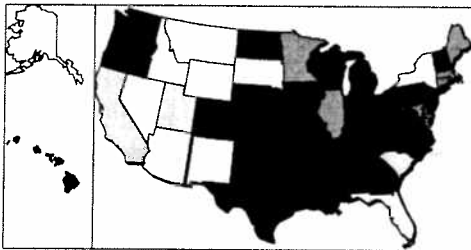
- Approximately 38 million homes may contain lead-based paint.

Before 1940	87 Percent
1940-1959	69 Percent
1960-1978	24 Percent
All Housing	40 Percent

### Federal Environmental Health Agencies

- Federal Regulations
  - HUD Regulations
  - EPA Regulations
    - Delegated to the states
  - OSHA Regulations
    - States must match OSHA Law
  - CDC Guidelines
    - Though only guidelines, can demonstrate to a court a standard of care

### State Lead Hazard Reduction Statutes



### Hazards of Renovation, Repair and Painting

- Renovation activities that disturb lead-based paint create dust and debris. Debris becomes dust.
  - Lead-contaminated dust is poisonous.
- Very small amounts of lead-contaminated dust can poison children and adults.
  - Children swallow dust during ordinary play activities.
  - Adults swallow or breathe dust during work activities.
- Workers can bring lead-contaminated dust home and poison their families.

### To Protect Children from the Hazards of Renovation, Repair and Painting

- Relocate occupants during paint removal, especially young children
- Isolate work areas from other areas of the house
- Avoid practices that create lead dust or fumes (abrasive sanding, scraping, heat guns)
- Perform a full cleanup after work is completed (as per EPA RRP Rule)
- Consider monitoring BLL in persons who work or live in building

Source: HUD

### Hazards of Renovation, Repair and Painting

- Sanding and scraping
- Removal of painted materials or structures
- Use of heat-guns
- Any activity that disturbs in-tact paint

### State R&R Studies

#### NY Dept. of Health

- The number of children with EBL in 1994 that were exposed to renovations, remodeling or painting - 6.9 %
- The number of children with EBL in 2007 exposed to renovation, remodeling or painting - 14.3 % above 20 ug/dL

#### OR Dept. of Health

- The number of children with EBL in 2007 exposed to renovation, remodeling or painting - 43.4 % above 10 ug/dL
- The number with EBL in 2007 from LBP - 18%

### EPA RRP Rule Scope

- **Covers renovation, repair and painting activities that disturb painted surfaces in:**
  - Most housing constructed before 1978
  - Child-occupied facilities
    - Buildings built before 1978 that are frequented by children under age 6.
    - Includes kindergartens and child care centers
    - Includes Elementary Schools undertaking renovation or remodeling work with children under 6.

### Who is Covered?

- All covered renovations must be performed by certified renovation firms, using certified renovators and other trained workers.
- Certification allows the firm to perform renovations in any non-authorized State or Indian Tribal area.
- Renovators must be formally trained by accredited training providers.

### EPA Authorization of State Programs

- States, Territories, and Tribes may obtain authorization to administer and enforce their own RRP programs.
- EPA will authorize programs that are:
  - At least as protective as the Federal rule
  - Provide adequate enforcement.
- Final rule outlines application process and provides guidance to programs developing their own programs.

### State Authorization

- Compliments current State programs on lead training, certification and enforcement.
- Should be self-sustaining via Fee revenues generated by the program.
- States have latitude to create program the best meets the needs of the public and workforce in their state.

### Mold Hazards

- Mold can cause allergic reactions in some people and worsen asthma symptoms.
- Those with immune suppression and respiratory disease are most vulnerable
- No solid evidence that some molds that grow in houses are worse than others, i.e. toxic.
- However some people are sensitive to molds. These people may experience symptoms such as nasal stuffiness, eye irritation, or wheezing when exposed to molds.



## Federal Mold Efforts

- CDC and EPA agree that mold poses some threat to human health and warrants remediation. Both agencies are engaged in education efforts.
- OSHA, CDC and EPA feel that scientific defensible standards for levels of mold in the home cannot be determined.
- EPA Efforts
  - Created voluntary guidance on controlling mold stressing prevention.
  - Developing an on-line mold course
  - Developing a new training standard
- One Congressional Bill - HR 1268 by Conyers (2003)



## Training and Certification

- Provides protection for homeowners, renters, and insurance agencies.
- Certified Industrial Hygienist may be the most qualified at this time.
- Only 4 State regulate mold inspectors and remediators - FL, IL, LA and TX
  - CA, CT, ME, NY, OK and VA have laws relating to mold
- For question and advice on training providers, and EPA policies, contact Jack Barnett of EPA Region 5, phone 312-886-6175

## Training and Certification

- Texas HB 329 (enacted 2003)
  - requires licensing of mold assessment and remediation practitioners.
  - Permits Dept. of Health to establish minimum performance standards.
- Louisiana HB 1328 (enacted 2003) requires licensing of mold inspectors and remediators
- Florida SB 1350 (introduced 2004) looks at requiring registration and training for assessors, remediators and training providers.
- Illinois Stat. ch 410, s. 105/1 to 199 (2008) authorizes the Department of Public Health to establish a registration program for firms that provide mold remediation services.

## Surgeon General Statement

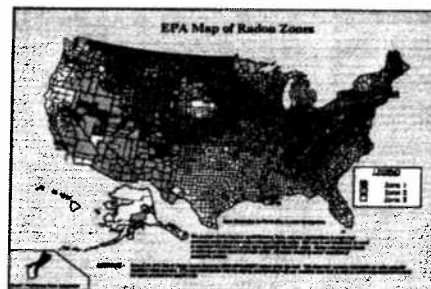
*"Indoor radon is the second-leading cause of lung cancer in the United States and breathing it over prolonged periods can present a significant health risk to families all over the country.... This threat is completely preventable."*

January 2005

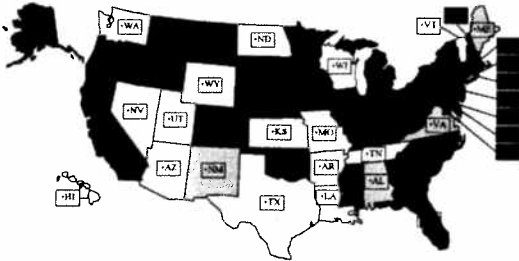
## State Programs: Radon

- No EPA mandate; state programs voluntary
  - TSCA Title II - Indoor Radon Abatement
  - 112(b) Air Toxic under the Clean Air Act
- 35 states have some Radon laws on the books
  - Many require disclosure of Radon upon sale
- No state mandates testing of public schools or public buildings, though all recommend it
  - Ohio provides free testing to all schools upon request

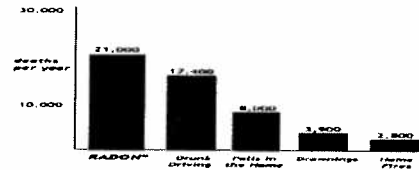
## Radon Zones in U.S.



Blue = Radon Certification  
 Red = Radon Laws  
 Green = Certification by Regulation

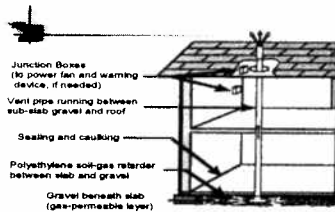


### Deaths per Year from Radon



### Radon-Resistant Homes

#### Construction of Radon-Resistant Homes



### Environmental Health

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